Alan P. Sullivan III, Patrick M. Uphus,
Christopher I. Roos, and Philip B. Mink II

Inadvertent Vandalism
The Hidden Challenge for Heritage Resource Management

Concerns about reducing or eliminating threats to the nation's heritage resources have a deep history in American archeology.[1] Nearly a century ago, widespread recognition of the destructive consequences of unregulated use of the archeological record helped secure passage of the Antiquities Act of 1906.[2] Motivations[3] and vagueness aside,[4] the 1906 act is the keystone statute that, in conjunction with the Archaeological Resources Protection Act of 1979 (ARPA) and the National Historic Preservation Act of 1966, safeguards America's heritage resources.[5] Although designed principally to regulate excavation of archeological sites on Federal lands and to prevent unauthorized removal of their contents, these laws presume that acts of deliberate vandalism, such as looting and defacement,[6] are committed by people who are motivated to possess objects of the past[7] or behave maliciously. Section 1 of the Antiquities Act, for example, states that convicted violators will be fined or imprisoned if they "appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument."[8] Similarly, Section 6(a) of ARPA stipulates that "No person may excavate, remove, damage, or otherwise alter or deface any archeological resource."[9] By these standards, the following cases from Kaibab National Forest might be considered violations of the law. In one instance, soil dug from the artifact-rich plaza in front of a masonry structure was used to extinguish a fire in a hearth-ring that had been constructed with the ruin's architectural debris (photo below). In another occurrence, a masonry roomblock had been partially dismantled in order to provide rock for the construction of an unusually large campfire hearth (photo p. 43). There is no evidence to suspect, however, that these heritage resources were disturbed for reasons other than they supplied convenient sources of material — soft dirt in the latter case and rocks in the former.

Large hearth constructed of architectural debris from an adjacent 11th-century ruin.

This article explores the consequences of inadvertent vandalism, which refers to acts that alter the postabandonment properties of heritage resources — such as site size, artifact number, artifact density, condition — that are independent of the resources' historic, aesthetic, or economic qualities. The discard of trash and the construction of structures on the surfaces of heritage resources, as well as the intrusion of hearths through them, are examples of inadvertent vandalism. As numerous studies have shown,[10] the interpretive potential of heritage resources is degraded by modern activities that modify surface properties, mix surface and subsurface material, or cause erosion.[11] Although specific resources are not targeted in inadvertent vandalism, the integrity of resources can be diminished dramatically nonetheless — in some cases literally overnight — by people who are unaware that they are behaving destructivly in an archeologically rich landscape. As R. N. Clark notes, "In some cases, recreationists who have little contact with the environment may really not know what

Hole dug into an artifact-rich plaza to extinguish a campfire within a hearth that had been constructed of architectural debris from an adjacent 11th-century ruin.

is defined as vandalism."[12] We would expand Clark's observation by adding that recreationists and other users of public lands may not know what constitutes a heritage resource. Hence, in contrast to the more sensational cases of intentional vandalism that have been the usual focus of law enforcement and prosecution, inadvertent vandalism may pose a far greater challenge to those agencies responsible for protecting the Nation's heritage resources.

A Study of Inadvertent Vandalism

To illustrate these points, we present some data and analyses regarding the degree to which heritage resources have been affected by inadvertent vandalism in an area called the Upper Basin, which is located in Kaibab National Forest just south of Grand Canyon National Park in north-central Arizona. Like many regions of the American West, the Upper Basin is mantled by a dense pinyon-juniper woodland and contains abundant heritage resources.[13] The Upper Basin Archaeological Research Project (UBARP) has completed a double-intensive archeological survey of 14 square kilometers of the Upper Basin, which means that the same terrain has been surveyed at least twice by crew spaced about 10 meters apart. With GPS technology, the UBARP survey has recorded the locations of 810 Mapping Units (MU). An MU refers to any observable phenomenon, such as a structure, a fire-cracked rock pile, or an artifact concentration, whose origins cannot be attributed to natural processes.[14] Of several observations made about the condition of an MU, particular attention is paid to whether any postabandonment material has been deposited, such as trash, woodcutting slash, or campfire rings or hearths. These observations allow us to gauge the extent of two principal types of inadvertent vandalism — woodcutting and camping.

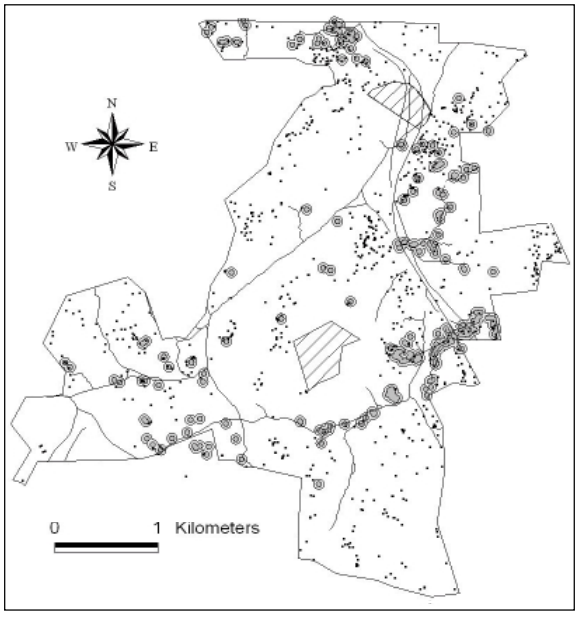
Of the 810 MUs logged by the UBARP survey, for instance, 24.1 percent disclose evidence of woodcutting such as stumps, slash piles, sawdust, and discarded chainsaw oil containers. As an indication of how widespread woodcutting is throughout our project area, MUs that have sustained woodcutting are as likely to be near roads as those MUs that have not. This finding is attributable to the fact that four-wheel-drive and all-terrain vehicles allow woodcutters to reach virtually anywhere in the countryside. Lamentably, prehistoric structures are particularly susceptible to woodcutting damage because conifers thrive in the ruins' fine-grained sediments. In these cases, public lands take a double hit because live trees are being harvested directly from heritage resources.

Two lines of evidence show that camping, signified by brush structures, scatters of trash, and campfire rings or hearths, is the most potent type of inadvertent vandalism sustained by the Upper Basin's heritage resources. First, we have documented the locations of 344 campfire hearths with GPS technology. Of these, exactly one-half occur within 40 meters of a known MU, and 28.2 percent are situated directly on a MU. Although the U.S. Forest Service promotes "no trace" camping, these data indicate that such admonitions are largely unheeded. In addition to the hearths, several makeshift "bucket" toilets have been discovered; these violate official policies on human waste disposal.[15] Second, and in striking contrast to the factors promoting woodcutting damage, MUs impacted by camping are far more likely to be located near roads than MUs not impacted by camping. In all likelihood, the availability of level ground and ease of access to paved roads, especially for recreational vehicles, are the principal landscape features affecting peoples' decisions about where to camp. In addition, most Upper Basin camping occurs within a few hundred meters of a major State highway, and much of this activity is "spillover" from Grand Canyon National Park's Desert View campground. This campground is available on a first-

come, first-served basis and during the peak tourist season is sold out by 8:00 a.m. The only alternative for late arrivals is camping in Kaibab National Forest, which is advice commonly issued by park rangers. Clearly, inadvertent vandalism caused by camping in the Upper Basin is an interagency management problem.

Managing Inadvertent Vandalism

Since the UBARP survey was inaugurated in 1989, we have witnessed acceleration in the rate and scope of inadvertent vandalism. Because camping and woodcutting account for the vast bulk of the impacts sustained by the Upper Basin's heritage resources, it is unlikely that conventional approaches designed to control deliberate vandalism will be effective,[16] especially in view of the dramatic reduction in law enforcement budgets. We recommend two cost-effective measures to counteract this widespread and growing problem. First, designated campgrounds placed on level ground with fenced perimeters will discourage the establishment of new hearths and retard the expansion of camping-related impacts during the height of the tourist season in late spring through late summer. In the specific case of the Upper Basin, such campgrounds could be established quickly because an archeological survey already has been conducted in the area that would be affected by construction.[17] Second, because woodcutting is not dependent on campground availability or designated roads, a different management strategy is needed to control its effects. In our view, strategically placed access gates, equipped with locks activated by a barcode on special-use or woodcutting permits, would inhibit woodcutters from gaining access to archeologically sensitive areas. Unless restricted, woodcutting threatens not only unprotected heritage resources but the ancient conifers that grow on and around them.



Upper Basin Archaeological Research Project study area showing locations of 810 mapping units and "impact haloes" around modern campfire hearths. Stippled area is unsurveyed

Concluding Thoughts

Inadvertent vandalism profoundly affects surface archeological phenomena, the starting point of all archeological research[18] and the basis upon which most Federal heritage resource management decisions are made.[19] There are reasons to suspect that because inadvertent vandalism impacts the surface archeological record, its effects are considered less destructive or problematic than those of deliberate vandalism, which often targets buried deposits. In addition, because the bulk of legalistic discussion has focused on acts of deliberate vandalism, whether inadvertent vandalism carries the same penalties, even though inadvertent vandalism is unquestionably a significant aspect of the "archaeological resource protection problem."[20] Until unambiguous legal opinions are rendered regarding the punitive consequences of inadvertent vandalism, it would seem prudent to seek remedies in containment strategies rather than in the courtroom.

Our Upper Basin study illustrates, moreover, how archeologists have failed to educate the public on the importance of archeological variability.[21] The public's image of archeological remains typically is based on accounts involving comparatively large, spectacular sites[22] that are the least common features of regional archeological records.[23] Until public education efforts incorporate consideration of the full range of phenomena that archeologists routinely investigate, such as diffuse artifact scatters, unobtrusive structures, and piles of fire-cracked rock, widespread ignorance of what constitutes America's heritage resource base will ensure its continued decline.

The impacts of inadvertent vandalism on heritage resources are as consequential as they are unappreciated. The bad news is that, because vast areas of the Nation lack the large obtrusive remains that looters prefer,[24] inadvertent vandalism represents an unchecked threat to the preservation of the archeological record. The good news is that modest reallocations of Federal resources — human, operating, and research —

will go a long way to suppressing activities that, by any measure, are unacceptable to all managers and users of public lands.

Notes

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3 Raymond H. Thompson, "Edgar Lee Hewett and the Political Process," *Journal of the Southwest* 42, no. 2 (2000): 274-318.

4 Dee F. Green and Steven LeBlanc, "Vandalism of Cultural Resources: The Growing Threat to Our Nation's Heritage," in Dee F. Green and Polly Davis, eds., *Cultural Resources Law Enforcement: An Emerging Science* (Washington, DC: USDA Forest Service, 1981), 15-24.

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7 Lance R. Williams, "The Study of Vandalism to Cultural Resources," in Green and Davis, *Cultural Resources Law Enforcement*, 17-24.

8 Ronald F. Lee, "The Antiquities Act of 1906," *Journal of the Southwest* 42, no. 2 (2000): 199-381.

9 Sherry Hutt, Elwood W. Jones, and Martin E. McAllister, *Archaeological Resource Protection* (Washington, DC: The Preservation Press, 1992).

10 Patricia M. Spoerl, "Management Impacts on Cultural Resources: An Assessment of Forest Service Research Needs," in Joseph A. Tainter and Robert H. Hamre, eds., *Tools to Manage the Past: Research Priorities for Cultural Resource Management in the Southwest* (Washington, DC: USDA Forest Service General Technical Report RM-164, 1988), 17-25.

11 Leslie E. Wildesen, "The Study of Impacts on Archaeological Sites," in Michael B. Schiffer, ed., *Advances in Archaeological Method and Theory* (New York: Academic Press, 1982), 51-96.

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13 Alan P. Sullivan III, Philip B. Mink II, and Patrick M. Uphus, "From John W. Powell to Robert C. Euler: Testing Models of Grand Canyon's Prehistoric Puebloan Settlement History," in David A. Phillips, Jr., ed., *Culture and Environment in the American Southwest: Essays in Honor of Robert C. Euler* (SWCA Anthropological Papers, in press).

14 Alan P. Sullivan, III, "Theory of Archaeological Survey Design," in Linda Ellis, ed., *Archaeological Method and Theory: An Encyclopedia* (New York: Routledge, 2000), 600-605.

15 See Kaibab National Forest Website, <http://www.fs.fed.us/r3/kai>.

16 Harriet H. Christensen, Ken Mabery, Martin E. McAllister, and Dale P. McCormick, "Cultural Resource Protection: A Predictive Framework for Identifying Site Vulnerability, Protection Priorities, and Effective Protection Strategies," in Arnold P. Goldstein, ed., *The Psychology of Vandalism* (New York: Plenum Press, 1996), 117-126.

17 Christopher I. Roos, "The Impact of Inadvertent Vandalism to the Cultural Resources of the Upper Basin, Kaibab National Forest, Northern Arizona." Senior thesis, Department of Anthropology, University of Cincinnati (2000).

18 Alan P. Sullivan III, "Surface Phenomena in Archaeological Research," in Alan P. Sullivan III, ed., *Surface Archaeology* (Albuquerque: University of New Mexico Press, 1998), xi-xiii.

19 See footnote 10.

20 See footnote 9.

21 See footnote 11.

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23 Joseph A. Tainter, "Surface Archaeology: Perceptions, Values, and Potential," in Sullivan, ed., *Surface Archaeology*, 169-179.

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Alan P. Sullivan III is professor and head of the Department of Anthropology, University of Cincinnati.

Patrick M. Uphus is a graduate student in the Department of Anthropology, University of Cincinnati.

Christopher I. Roos is a graduate student in the Department of Anthropology, University of Arizona.

Philip B. Mink II is an archeologist and GIS specialist with the Department of Anthropology, University of Kentucky.

Illustrations by Alan P. Sullivan III.